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10/044,730	01/11/2002	Owen T. Anderson	RSW920010140US1	1599

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EXAMINER
LY, ANH

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed·
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☐ All b)☐ Some * c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is response to Applicants' Amendment filed on 08/13/2004.

2.   Claims 1- 32 are pending in this application.

Response to Arguments

3.   Applicant's arguments filed on 08/13/2004 have been fully considered but they are not persuasive.

Applicants argued that, "Kao and Pinkoski do not discuss a file system that has been moved (Page 12, lines 36- and Page 13, lines 28-30).

In combination, Kao and Pinkoski teach transferring the request of an operation over the communications link to the different servers (Pinkoski - as shown in fig. 2 and col. 4, lines 8-28) and using the message to locating the file in the different path (abstract, col. 3, lines 12-22 and col. 5, lines 1-30).

Applicants argued that, "Thompson discuss data compression that is not the same as encoding the data file system identifier." (Page 15, lines 11-13).

Thompson et al. Of 5,463,772 teaches data compression/decompression and also teaches a large number of algorithms that implement the properties of the desired file system by converting the vnode-style file operation including converting of streams of character (col. 19, lines 2-30 and see abstract, col. 3, lines 40-55 and col. 4, lines 1-20).

Thus, Applicants arguments are not persuasive over the prior arts of record.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claims 1-4, 7-8, 16-19, 22-23 and 31 are rejected under 35 U.S.C. 103(a) as

being unpatentable over US Patent No. 5,870,734 issued to Kao in view of US Patent

No. 5,742,817 issued to Pinkoski.

With respect to claim 1, Kao teaches receiving a request for a referencing object

from a client, wherein the referencing object refers to a referenced file system (any

directory or file in the hierarchical file system is represented by a vnode from which the

user or client of the system enable to select the desired one to manipulate: see fig. 2, and col. 6, lines 28-58);

looking up a location of the referenced file system in a separate data structure (using look-up routine to search or find where the selected file in the hierarchical file system is. The hierarchical file system includes a plurality of separate directories or separate pathnames: see fig. 2, and col. 6, lines 41-58);

Kao teaches creating file system directory based on file system structure with a plurality of virtual nodes (vnodes), the selected directory nodes can be linked together to create a stack and only on the top of each stack is normally accessible. A lookup routine is used to find or access the specified file or directory name or path name and returning a vnode representing information if it is found to the first occurrence of the name encountered in the search to the caller of the procedure. Kao does not clearly teach a referenced file system that has been moved to a location on a different server; using information from said referencing object, and returning a redirection message indicating the location of the referenced file system to the client.

However, Pinkoski teaches transferring the request of an operation over the communications link to the different servers (as shown in fig. 2 and col. 4, lines 8-28) and using the message to locating the file in the different path (abstract, col. 3, lines 12-22 and col. 5, lines 1-30) and transferring message indicating the existence of the alternate path name to be returned to the client or requester of the system (see figs. 7A-7C and col. col. 8, lines 8-65 and col. 5, lines 60-67 and col. 6, lines 1-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Kao with the teachings of Pinkoski so as to enable to get the returning message for the alternative path name from the user in the network system. The motivation being to have a system receiving the request for manipulating the selected nodes or files or objects' location in a different level of directory or structure or hierarchical file from the user of the computer network system.

With respect to claims 2-4, Kao discloses a method for servicing a request as discussed in claim 1.

Kao teaches creating file system directory based on file system structure with a plurality of virtual nodes (vnodes), the selected directory nodes can be linked together to create a stack and only on the top of each stack is normally accessible. A lookup routine is used to find or access the specified file or directory name or path name and returning a vnode representing information if it is found to the first occurrence of the name encountered in the search to the caller of the procedure. Kao does not clearly teach wherein the redirection message includes an address of a referenced file system server containing said referenced file system, wherein the redirection message further includes a path, and wherein the referencing object has a file system identifier.

However, Pinkoski teaches the location or address of the path having referencing to another file system in the file system server (see fig. 4, col. 5, lines 1-42 and lines 50-67 and see fig. 2, FSID, col. 4, lines 8-32 col. 5, lines 1-20 also see abstract).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Kao with the teachings of Pinkoski so as to enable to get the addressing and pathname in the file system and FSID from the user in the network system. The motivation being to have a system receiving the request for manipulating the selected nodes or files or objects' location in a different level of directory or structure or hierarchical file from the user of the computer network system.

With respect to claim 7, Kao teaches wherein the referenced file system server is the requested file system server (remote file system is the file system server: col. 4, lines 18-34).

With respect to claim 8, Kao teaches wherein the separate data structure comprises a file- system location database (each directory storing the file that the client of the system want to search or find is a database that is storing the files: col. 4, lines 18-34, see fig. 1, 2 and col. 5, lines 55-67 and col. 6, lines 1-67).

Claim 16 is essentially the same as claim 1 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 1 hereinabove.

Claim 17 is essentially the same as claim 2 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 2 hereinabove.

Claim 18 is essentially the same as claim 3 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 3 hereinabove.

Claim 19 is essentially the same as claim 4 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 4 hereinabove.

Claim 22 is essentially the same as claim 7 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 7 hereinabove.

Claim 23 is essentially the same as claim 8 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 8 hereinabove.

Claim 31 is essentially the same as claim 1 except that it is directed to a computer product rather than a method, and is rejected for the same reason as applied to the claim 1 hereinabove.

7.   Claims 5-6, 9-12, 20-21 and 24-27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent No. 5,870,734 issued to Kao in view of US Patent No.

5,742,817 issued to Pinkoski and further in view of US Patent No. 5,463,772 issued to

Thompson et al. (hereinafter Thompson).

With respect to claim 5, Kao in view of Pinkoski discloses a method for servicing

request as discussed in claim 1.

Kao teaches creating file system directory based on file system structure with a

plurality of virtual nodes (vnodes), the selected directory nodes can be linked together to

create a stack and only on the top of each stack is normally accessible. A lookup routine

is used to find or access the specified file or directory name or path name and returning

a vnode representing information if it is found to the first occurrence of the name

encountered in the search to the caller of the procedure. Kao does not clearly teach

wherein the redirection message includes an address of a referenced file system server,

wherein the redirection message further includes a path, and wherein the referencing

object has a file system identifier. Pinkoski teaches the location or address of the path

in the file system server (see fig. 4, col. 5, lines 1-42 and lines 50-67 and see fig. 2,

FSID, col. 4, lines 8-32 col. 5, lines 1-20 also see abstract). In combination, Kao and

Pinkoski do not explicitly teach encoding the file system identifier, wherein the

redirection message further includes the encoded file system identifier.

However, Thompson teaches data compression on the file system's architecture

(col. 8, lines 12-66, col. 20, lines 1-18 and col. 21, lines 7-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Kao in view of Pinkoski with the teachings of Thompson so as to have the data procession and decompression on the file systems in the network system. The motivation being to have a system receiving the request for manipulating the selected nodes or files or objects' location in a different level of directory or structure or hierarchical file from the user of the computer network system.

With respect to claim 6, Kao teaches wherein the referencing object is a top level object for a uniform namespace including all file systems on participating file system servers (col. 4, lines 12-34).

With respect to claim 9, Kao in view of Pinkoski discloses a method for servicing request as discussed in claim 1.

Kao teaches creating file system directory based on file system structure with a plurality of virtual nodes (vnodes), the selected directory nodes can be linked together to create a stack and only on the top of each stack is normally accessible. A lookup routine is used to find or access the specified file or directory name or path name and returning a vnode representing information if it is found to the first occurrence of the name encountered in the search to the caller of the procedure. Kao does not clearly teach wherein the redirection message includes an address of a referenced file system server, wherein the redirection message further includes a path, and wherein the referencing object has a file system identifier. Pinkoski teaches the location or address of the path in the file system server (see fig. 4, col. 5, lines 1-42 and lines 50-67 and see fig. 2,

FSID, col. 4, lines 8-32 col. 5, lines 1-20 also see abstract). In combination, Kao and

Pinkoski do not explicitly teach identifying an encoded file system identifier in the

redirected request, decoding the encoded file system identifier to form a file system

identifier corresponding to a requested file system, and retrieving the root of the

requested file system using the path for the requested file system.

However, Thompson teaches compression and uncompression or decoding the

file system (col. 8, lines 12-66, col. 20, lines 1-18 and col. 21, lines 7-18; also see col.

35, lines 3-16) and the root of the directory (col. 21, lines 32-67 and col. 22, lines 1-3).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine the teachings of Kao in view of Pinkoski

with the teachings of Thompson so as to have the data procession and decompression

on the file systems in the network system. The motivation being to have a system

receiving the request for manipulating the selected nodes or files or objects' location in

a different level of directory or structure or hierarchical file from the user of the computer

network system.

With respect to claim 10, Kao teaches wherein the file system identifier data

structure comprises a file system identifier table(see fig. 7).

With respect to claim 11, Kao teaches wherein the separate data structure and

the file system identifier data structure are stored in a file system location database

(each directory storing the file that the client of the system want to search or find is a

database that is storing the files: col. 4, lines 18-34, see fig. 1, 2 and col. 5, lines 55-67

and col. 6, lines 1-67).

With respect to claim 12, Kao teaches wherein the referencing object is a top level object for a uniform namespace including all file systems on participating file system servers (col. 4, lines 12-34).

Claim 20 is essentially the same as claim 5 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 5 hereinabove.

Claim 21 is essentially the same as claim 6 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 6 hereinabove.

Claim 24 is essentially the same as claim 9 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 9 hereinabove.

Claim 25 is essentially the same as claim 10 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 10 hereinabove.

Claim 26 is essentially the same as claim 11 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 11 hereinabove.

Claim 27 is essentially the same as claim 12 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 12 hereinabove.

8.   Claims 13-15, 28-30 and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent No. 5,870,734 issued to Kao in view of US Patent No.

5,463,772 issued to Thompson et al. (hereinafter Thompson).

With respect to claim 13, Kao teaches receiving a request for a file system object

(any directory or file in the hierarchical file system is represented by a vnode from which

the user or client of the system enable to select the desired one to manipulate: see fig.

2, and col. 6, lines 28-58); and

looking up a path for the requested file system in a file system identifier data

structure (using look-up routine to search or find where the selected file in the

hierarchical file system is. The hierarchical file system includes a plurality of separate

directories or separate pathnames: see fig. 2, and col. 6, lines 41-58).

Kao teaches creating file system directory based on file system structure with a

plurality of virtual nodes (vnodes), the selected directory nodes can be linked together to

create a stack and only on the top of each stack is normally accessible. A lookup routine

is used to find or access the specified file or directory name or path name and returning

a vnode representing information if it is found to the first occurrence of the name

encountered in the search to the caller of the procedure. Kao does not clearly teach

wherein the redirection message includes an address of a referenced file system server,

wherein the redirection message further includes a path, and wherein the referencing

object has a file system identifier. Kao does not explicitly teach an encoded file system

identifier, which has been encoded using a predetermined system wide encoding

algorithm, decoding the encoded file system identifier to form a file system identifier

corresponding to a requested file system, and retrieving the root of the requested file system using the path for the requested file system.

However, Thompson teaches a large number of algorithms that implement the properties of the desired file system by converting the vnode-style file operation including converting of streams of character (col. 19, lines 2-30 and see abstract, col. 3, lines 40-55 and col. 4, lines 1-20), compression and uncompression or decoding the file system (col. 8, lines 12-66, col. 20, lines 1-18 and col. 21, lines 7-18; also see col. 35, lines 3-16) and the root of the directory (col. 21, lines 32-67 and col. 22, lines 1-3).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Kao with the teachings of Thompson so as to have the data procession and decompression on the file systems in the network system. The motivation being to have a system receiving the request for manipulating the selected nodes or files or objects' location in a different level of directory or structure or hierarchical file from the user of the computer network system.

With respect to claim 14, Kao teaches wherein the file system identifier data structure is stored in a table (see fig. 7).

With respect to claim 15, Kao teaches wherein the file system identifier data structure is stored in a file system location database (each directory storing the file that the client of the system want to search or find is a database that is storing the files: col. 4, lines 18-34, see fig. 1, 2 and col. 5, lines 55-67 and col. 6, lines 1-67).

Claim 28 is essentially the same as claim 13 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 13 hereinabove.

Claim 29 is essentially the same as claim 14 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 14 hereinabove.

Claim 30 is essentially the same as claim 15 except that it is directed to an apparatus rather than a method, and is rejected for the same reason as applied to the claim 15 hereinabove.

Claim 32 is essentially the same as claim 13 except that it is directed to a computer product rather than a method, and is rejected for the same reason as applied to the claim 1 hereinabove.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact Information

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ly whose telephone number is (571) 272-4039 or via E-Mail: ANH.LY@USPTO.GOV **or fax to (571) 273-4039**. The examiner can normally be reached on TUESDAY – THURSDAY from 8:30 AM – 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (571) 272-4107 or Primary Examiner Jean Corrielus (571) 272-4032.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: Central Fax Center (703) 872-9306

JEAN M. CORRIELUS
PRIMARY EXAMINER

ANH LY
JAN. 4th, 2005